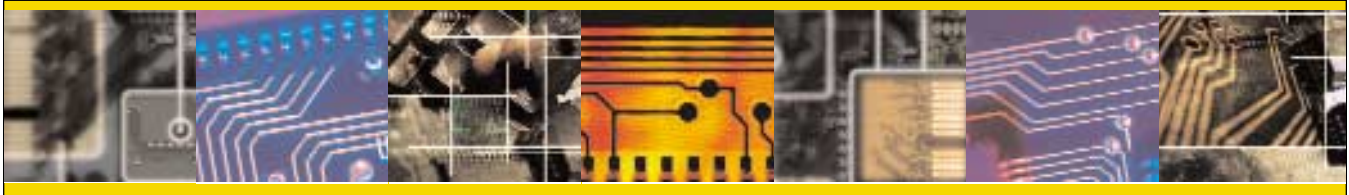


# ECM-20

Welcome to American Arium's state-of-the-art family of in-target probes (ITPs). The ECM-20 represents one of Arium's latest best-of-breed hardware-assisted debug solutions for BIOS, device drivers, OS kernels, and embedded applications. Developed specifically for use with Intel IA-32 processors, including all Intel Celeron™, Pentium® II/III/4, and Xeon™ processors, this ITP features outstanding run control functionality for superior visibility to and manipulation of your code.

**To improve your time to market, count on the ECM-20.**



## Key Features

### Supported toolchains:

- Wind River® Tornado® II C/C++
- Microsoft® Visual C/C++® V6/V7
- Borland® C
- CAD-UL C
- GNU C/C++
- Metaware® C

### Breakpoint types:

- 4 debug register
- 64 software
- SMM entry/exit
- Reset
- BNC external trigger in/out

### Source code/symbolic debug:

- Boot-loadable OMF-386
- DWARF2
- Intel Textsym
- Codeview
- a.out/Stabs

### Download formats:

- BIN
- OMF-386
- ELF32
- DOS EXE
- Intel Hex
- PE32/PE32+

### Connection options:

- USB
- 10Base-T ethernet



ECM-20 with PBD-S2V

### Address translation options:

- Real
- Virtual-86
- BigReal
- Protected
- System Management Mode (SMM)

### Register types:

- 386
- System
- Control
- Debug
- MSRs
- Floating point
- MMX™ technology
- SSE

### Other important features:

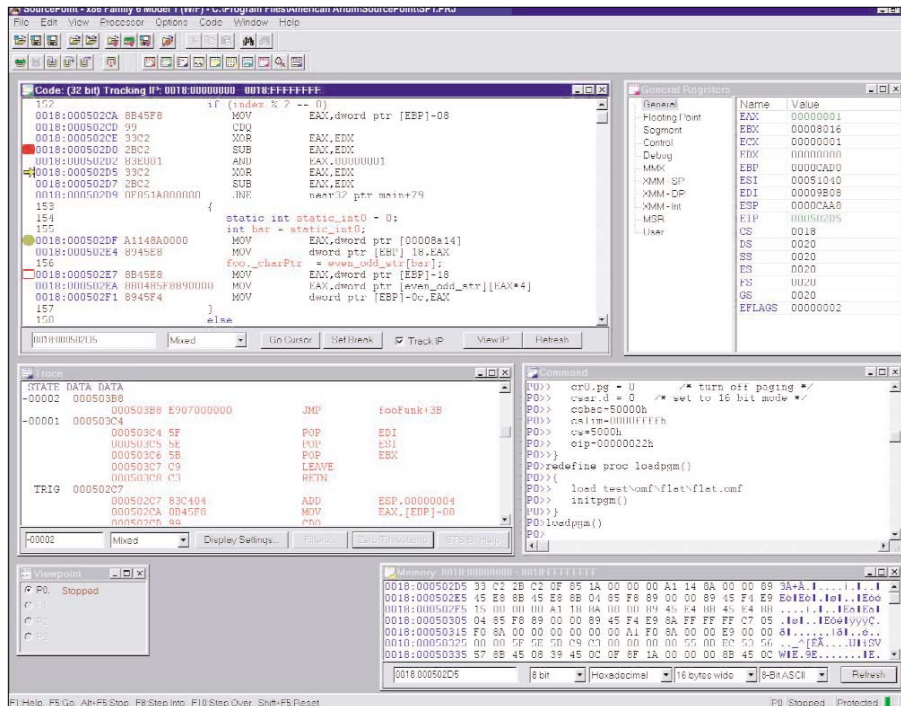
- Execution trace
- Real time operation
- Multi-processor (SMP) support
- Multi-cluster support
- In-line assembly
- Robust scripting language
- Code/data search and replace
- Self-diagnostic test suite

## Key Benefits

- **Powerful** - Arium probes and emulators are the only debug tools that allow you to debug hardware and software directly out of system reset.
- **Reliable** - The ECM-20 is one of the most reliable ITPs on the market today.
- **Flexible** - The ECM-20 offers a number of firmware- and software-related and customizable options to provide you with the type of debug environment that best meets your needs.
- **Suitable** - The ECM-20, with its companion SourcePoint interface, provides a highly integrated, intuitive tool designed with your needs in mind.
- **Upgradable** - Many of Arium's base units can be used with newly announced Intel processors and upgraded to our full-featured trace products.
- **Supportable** - All Arium units produced for the IA-32 and IA-64 market are fully supported by our highly trained staff, including legacy products.



# ECM-20



## SourcePoint Interface

Included with the ECM-20 is American Arium's SourcePoint debugging software. The debugger interface is part of the company's core technology, developed specifically for high-end Intel Architecture (IA) design and debug. The 32-bit application runs on Microsoft® Windows® 95/98/ME/NT/2000/XP.

SourcePoint is used with all American Arium probes and emulators. Because we designed and developed the software specifically for the equipment, the tight integration of the hardware and software gives you one of the most robust debug interfaces on the market. Easy to install and use, SourcePoint has IA-32- and IA-64-specific features that cannot be found in any other debugger. Multi-processor control, complex breakpoints, source-level visibility, and other key features all add up to make SourcePoint the most powerful tool in the industry today.

## PC Host Requirements

- PC host (Intel Pentium/AMD processor or higher)
- Microsoft Windows 95B (or later)/98/ME/NT 4.0 (SP4 or later)/2000/XP
- SVGA monitor (1024 x 768 or higher)
- 60 MB hard disk space
- 128 MB RAM
- 10Base-T ethernet or USB 1.1 connection port

## Specifications

### Environmental

32-90° F (0-31° C)  
Maximum humidity - 85%

### Communications

10Base-T ethernet connection  
USB 1.1 connection

### BNC Trig In

50 Ohm, 155 ns maximum delay

### BNC Trig Out

50 Ohm, 125 ns maximum delay

### Dimensions (in/cm)

(H) 2.25/5.7  
(W) 6.2/15.7  
(L) 9.6/24.4

## Ordering Information

### Standard

Includes in-target probe base unit, appropriate cables, power supply, SourcePoint software, documentation, and one year service agreement.

### Options

#### TAP adapters:

- TAP-WT** Intel Pentium 4 processor TAP adapter (423-pin package)
- TAP-PSC** Intel Pentium 4 processor TAP adapter (478-pin package)
- TAP-S1** Intel Pentium II/III processor TAP adapter (Slot 1, 66/100/133 MHz FSB)
- TAP-S2** Intel Pentium II/III Xeon processor TAP adapter (Slot 2, 66/100/133 MHz FSB)
- TAP-TU** Intel Pentium III (including the 1.13A-120+ GHz on 0.13 micron process), Celeron processor TAP adapter (370-pin PGA)
- TAP-MT** Intel Mobile Pentium III Processor-M TAP adapter (uFCPGA)

#### Personality modules:

- PBD-S2V** Personality board for Intel Pentium II/III (Slot 1, 66/100/133 MHz FSB), Pentium III - 1/13A-120+ GHz on 0.13 micron process (370-pin PGA), Pentium III Xeon (Slot 2, 66/100/133 MHz), Mobile Pentium III (uPGA2), Mobile Pentium III Processor-M (uFCPGA), Celeron (uPGA2 or 370-pin PGA) processors (lower processor voltages, different clocking)
- PBDS-BN** Personality board for Intel Xeon and certain mobile processors
- PBDS-PSC** Personality board for Intel Xeon and Pentium 4 processors

#### Other:

- STAR-1** Extended service agreement

